

Today's Topics:

NASA Prediction Bulletins

Date: Sat, 14 Oct 89 21:22:03 EDT
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Subject: NASA Prediction Bulletins

The most current orbital elements from the NASA Prediction Bulletins are carried on the Celestial RCP/M, (513) 427-0674, and are updated several times weekly. Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space. This week's elements are provided below. The Celestial RCP/M may be accessed 24 hours/day at 300, 1200, or 2400 baud using 8 data bits, 1 stop bit, no parity.

- Current NASA Prediction Bulletins #584 -

Alouette 1

1 00424U 89283.15425690 0.00000246 28594-3 0 2368
2 00424 80.4657 172.5499 0022355 194.1266 165.9256 13.67209112348523

SOLRAD R/B

1 00727U 64001 A 89280.09978248 .00000266 00000-0 23416-3 0 3044
2 00727 69.9082 216.1025 0014972 305.0094 54.9598 13.93590317308689

Cos 185 R/B

1 03019U 67104 B 89282.90306423 .00008262 00000-0 56846-3 0 4576
2 03019 64.0530 110.1498 0207085 213.8059 144.9745 14.90719383122179

ATS 3

1 03029U 67111 A 89266.35100633 -.00000074 00000-0 99999-4 0 2592
2 03029 12.8638 23.3743 0017010 199.4187 160.5377 1.00272430 80123

Cosmos 398

1 04966U 71 16 A 89283.74993919 .00094193 14971-5 59006-3 0 1405
2 04966 51.5166 124.6001 2459591 52.4969 327.5095 10.65432987564613

Starlette

1 07646U 75010 A 89283.76788467 -.00000028 00000-0 00000-0 0 09956
2 07646 049.8236 062.6296 0205425 087.6031 274.8940 13.82121577741284

LAGEOS

1 08820U 76039 A 89283.18892733 .00000238 00000-0 00000-0 0 08952
2 08820 109.8287 269.4853 0044936 292.3735 067.2365 06.38665527057974

GOES 2

1 10061U 77048 A 89282.45349986 -.00000003 00000-0 00000 0 0 3134
2 10061 7.4413 66.7205 0007393 168.8550 191.3049 1.00271380 6522

GPS-0001

1 10684U 89281.63803045 0.00000010 10000-3 0 2386
2 10684 63.6177 97.3291 0111262 197.8022 161.8460 2.00558865 70804

GPS-0002

1 10893U 89274.62018945 -.00000027 0 445

2 10893 64.4798 338.3997 0155348 27.3906 333.4950 2.00553295 83487
 GOES 3
 1 10953U 78062 A 89282.50395961 .000000089 00000-0 99999-4 0 7408
 2 10953 6.3072 69.3275 0006128 241.8240 118.3787 1.00277319 2083
 SeaSat 1
 1 10967U 89283.19844885 0.00001034 40631-3 0 1749
 2 10967 108.0191 164.5628 0002109 276.4408 83.6615 14.34897912590584
 GPS-0003
 1 11054U 89282.40815193 -.000000026 0 1114
 2 11054 64.0247 334.5572 0055395 120.3469 240.2734 2.00563395 80651
 GPS-0004
 1 11141U 89274.52775506 0.000000010 0 2201
 2 11141 63.6000 97.4435 0055938 320.6842 38.9604 2.00568163 79199
 NOAA 6
 1 11416U 89283.48588635 0.00001221 52685-3 0 9107
 2 11416 98.5159 277.2717 0012323 127.8579 232.3820 14.26048374534332
 GPS-0005
 1 11690U 89282.63932464 0.000000011 0 8600
 2 11690 64.0797 99.1291 0108965 202.9146 156.6375 2.00558728 85212
 Solar Max
 1 11703U 89283.92384159 0.00222036 15124-2 0 1365
 2 11703 28.4968 171.5399 0003138 310.7349 49.3199 15.73060954537941
 GPS-0006
 1 11783U 89284.45721895 -.000000026 0 9764
 2 11783 63.8249 334.1170 0142342 61.8067 299.6990 2.00570557 69333
 GOES 4
 1 11964U 80 74 A 89280.73164102 -.000000231 00000-0 00000 0 0 897
 2 11964 5.7870 72.2807 0033383 100.6369 259.8870 0.99234749 3145
 GOES 5
 1 12472U 81049 A 89280.35436304 -.000000249 00000-0 99999-4 0 7626
 2 12472 2.8262 79.1120 0004653 189.0607 171.2832 1.00267916 29712
 SME
 1 12887U 81100 A 89283.60062504 .00033012 00000-0 10173-2 0 3312
 2 12887 97.6787 313.7900 0000855 108.5555 251.5932 15.33545769442816
 UOSAT 1
 1 12888U 89285.23337844 0.04374103 12461-4 96034-3 0 7749
 2 12888 97.5237 349.4102 0007542 251.4078 108.7958 16.30449295447444
 Meteor 2-08
 1 13113U 89278.17525654 0.000000231 19730-3 0 6690
 2 13113 82.5435 331.3466 0016351 109.1863 251.1045 13.84054208380451
 Salyut 7
 1 13138U 89284.68795552 0.00017762 36068-3 0 8115
 2 13138 51.6067 105.0853 0001233 170.0535 189.9832 15.46409976426198
 LandSat 4
 1 13367U 82 72 A 89282.96812017 .00003113 00000-0 70004-3 0 1266
 2 13367 98.2006 344.9300 0002368 173.7643 186.3677 14.57140240384865
 Meteor 2-09
 1 13718U 89278.19386216 0.000000482 24750-3 0 8218

2 13718 81.2472 173.9295 0056922 46.6102 313.9766 14.13311815351096
 IRAS
 1 13777U 89280.48282262 0.00000505 37564-3 0 6833
 2 13777 99.0372 116.0263 0013171 8.6058 351.5316 13.98651051 11618
 Cosmos 1447
 1 13916U 83 21 A 89265.35956750 .00000185 00000-0 18462-3 0 6494
 2 13916 82.9433 210.0122 0037730 163.5144 196.7250 13.73954350325890
 TDRS 1
 1 13969U 83 26 B 89281.36221950 -.00000202 00000-0 00000 0 0 8479
 2 13969 3.8480 67.8259 0003293 159.0474 200.9905 1.00259549 90556
 GOES 6
 1 14050U 83 41 A 89283.55088900 .00000119 00000-0 00000 0 0 239
 2 14050 1.5933 80.8798 0001283 163.7678 197.0165 1.00280522 7764
 OSCAR 10
 1 14129U 89281.27063449 -.00000063 0 4320
 2 14129 25.9445 240.4299 6036744 82.8095 338.1676 2.05882809 19545
 GPS-0008
 1 14189U 89278.56280459 0.00000009 10000-3 0 6670
 2 14189 63.2453 95.8925 0138415 215.1151 144.0132 2.00565010 45658
 Meteor 2-10
 1 14452U 89284.05335147 0.00001092 46423-3 0 7783
 2 14452 81.1650 177.4194 0095516 122.1195 238.9375 14.22356391309015
 LandSat 5
 1 14780U 89284.85099251 0.00002618 59010-3 0 9422
 2 14780 98.1552 344.7794 0001628 221.9037 138.2011 14.57176292298550
 UOSAT 2
 1 14781U 89284.10753364 0.00002536 49099-3 0 5266
 2 14781 97.9904 339.4958 0013494 320.3445 39.6907 14.64112723299504
 LDEF
 1 14898U 89282.81444784 0.00078249 91067-3 0 52
 2 14898 28.5043 84.2198 0002333 99.0719 261.0404 15.60241676309313
 GPS-0009
 1 15039U 89282.61202869 0.00000008 0 7434
 2 15039 62.9634 94.9822 0014302 244.7340 115.1563 2.00564200 39012
 Cosmos 1574
 1 15055U 84 62 A 89281.92123262 .00000146 00000-0 14602-3 0 7884
 2 15055 82.9530 247.4870 0026907 305.8799 53.9861 13.73274340265584
 Meteor 2-11
 1 15099U 89280.96944267 0.00000113 96792-4 0 9696
 2 15099 82.5285 276.6746 0011948 286.2268 73.7575 13.83710134265717
 GPS-0010
 1 15271U 89281.51474078 -.00000027 0 7154
 2 15271 63.3259 333.9119 0102217 321.4806 37.8674 2.00568736 36104
 Cosmos 1602
 1 15331U 89283.34010621 0.00003365 48141-3 0 965
 2 15331 82.5359 232.1068 0026415 68.7382 291.6689 14.76139808271201
 NOAA 9
 1 15427U 89283.91115361 0.00001059 59690-3 0 4380

2 15427 99.1548 273.1984 0015261 352.6496 7.4481 14.12203980248784
 Meteor 2-12
 1 15516U 89281.87830371 0.00000483 42310-3 0 1217
 2 15516 82.5353 214.3143 0016658 151.4071 208.8009 13.84175790236787
 Cosmos 1686
 1 16095U 89284.81720492 0.00035187 70387-3 0 3866
 2 16095 51.6037 104.4514 0000580 141.5139 218.5463 15.46434117227311
 GPS-0011
 1 16129U 89282.66862365 0.00000009 0 3575
 2 16129 63.7658 95.7531 0120847 149.7192 211.0315 2.00562459 29334
 Meteor 3-1
 1 16191U 89284.68047244 0.00000043 10000-3 0 8656
 2 16191 82.5510 153.3969 0020892 10.9850 349.1733 13.16879046190859
 Meteor 2-13
 1 16408U 89281.95860707 0.00000190 16061-3 0 5362
 2 16408 82.5351 129.1437 0016518 346.8482 13.2251 13.84218574191297
 Mir
 1 16609U 89285.29533091 0.00044727 53126-3 0 1227
 2 16609 51.6192 135.6360 0016045 119.5454 240.8102 15.60558033209438
 SPOT 1
 1 16613U 89284.84004081 0.00001395 67281-3 0 6297
 2 16613 98.7292 357.8714 0001264 147.7984 212.3308 14.20040548 28685
 Meteor 2-14
 1 16735U 89281.80760570 0.00000331 28862-3 0 3273
 2 16735 82.5390 156.1383 0015860 54.6043 305.6651 13.83974373170170
 Cosmos 1766
 1 16881U 89283.54188782 0.00003238 46653-3 0 7582
 2 16881 82.5177 291.3123 0024479 87.3874 273.0226 14.75863004172303
 EGP
 1 16908U 89280.48807213 -.00000027 11644-3 0 1534
 2 16908 50.0099 312.8522 0011367 273.2446 86.7089 12.44380844143394
 FO-12
 1 16909U 89280.46642003 -.00000025 10000-3 0 1732
 2 16909 50.0162 313.1889 0010955 268.6628 91.2950 12.44401240143389
 NOAA 10
 1 16969U 89283.52849235 0.00000670 31321-3 0 2885
 2 16969 98.6310 311.7934 0012682 277.4188 82.5567 14.23205209160349
 Meteor 2-15
 1 17290U 89281.46271467 0.00000149 12515-3 0 2953
 2 17290 82.4626 62.9163 0012454 310.6597 49.3483 13.83764839139289
 MOS-1
 1 17527U 87 18 A 89281.79909193 .00000397 00000-0 32117-3 0 2765
 2 17527 99.1383 352.2295 0001034 101.5669 258.5627 13.94847260134211
 GOES 7
 1 17561U 89283.21862472 -.00000108 00000-0 00000 0 0 3456
 2 17561 0.0099 261.2525 0004727 280.0354 178.7404 1.00271639 2917
 Kvant
 1 17845U 89284.91043159 0.00048074 57084-3 0 8840

2 17845 51.6206 137.5652 0017408 120.4589 236.1169 15.60506702145645
 DMSP B5D2-3
 1 18123U 87 53 A 89281.89784257 .00001019 00000-0 55968-3 0 4011
 2 18123 98.8229 110.8753 0015445 19.0508 341.1246 14.13590748118892
 RS-10/11
 1 18129U 89284.86047371 0.00000035 31898-4 0 9055
 2 18129 82.9281 151.9931 0013103 87.6258 272.6375 13.72012138115395
 Cosmos 1867
 1 18187U 87 60 A 89281.81580836 .00000438 00000-0 20671-3 0 9694
 2 18187 65.0122 65.3926 0017463 253.2422 106.6723 14.29420054117369
 Meteor 2-16
 1 18312U 89281.59448493 0.00000219 18868-3 0 3257
 2 18312 82.5584 129.7017 0011098 238.4644 121.5424 13.83527207108192
 Meteor 2-17
 1 18820U 89281.73436686 0.00000343 29770-3 0 1607
 2 18820 82.5470 190.3169 0016234 315.9631 44.0240 13.84214472 85395
 DMSP B5D2-4
 1 18822U 88 6 A 89281.94249701 .00000905 00000-0 43562-3 0 3011
 2 18822 98.6763 160.7439 0005804 279.3563 80.6958 14.20951253 87131
 AO-13
 1 19216U 89280.07958878 0.00000494 37172+0 0 491
 2 19216 57.1615 187.6673 6809834 212.8443 75.8148 2.09699553 10086
 OKEAN 1
 1 19274U 88 56 A 89282.96153302 .00006718 00000-0 98313-3 0 5218
 2 19274 82.5193 30.4643 0022129 215.9419 144.0357 14.75373108 68007
 Meteor 3-2
 1 19336U 89284.89614155 0.00000391 10000-2 0 2800
 2 19336 82.5357 93.1062 0015812 214.9759 145.0305 13.16862726 58271
 NOAA 11
 1 19531U 89281.72293336 0.00001051 60288-3 0 1458
 2 19531 98.9482 225.2575 0011076 273.4173 86.5736 14.11187494 53486
 TDRS 3
 1 19548U 88 91 B 89267.46577487 .00000131 00000-0 99999-4 0 381
 2 19548 0.5698 83.2183 0002326 63.9607 212.5286 1.00277038 2787
 Cosmos 2001
 1 19796U 89282.96843003 -.00000941 17342-1 0 2281
 2 19796 62.8538 125.6635 7215351 319.4195 4.9563 2.00679466 4786
 GPS-0014
 1 19802U 89281.68171902 0.00000016 10000-3 0 544
 2 19802 55.0882 207.3326 0063992 158.0327 202.2596 2.00559422 4704
 Meteor 2-18
 1 19851U 89281.42362389 0.00000117 10000-3 0 802
 2 19851 82.5161 69.0327 0015229 356.1019 4.0023 13.83844948 30745
 TDRS 4
 1 19883U 89 21 B 89268.10162323 -.00000234 00000-0 99999-4 0 316
 2 19883 0.4771 68.4817 0003970 234.9432 56.4613 1.00261143 1228
 GPS-0013
 1 20061U 89280.87090057 -.00000030 0 355

2	20061	54.6429	26.0899	0082887	167.3155	192.9165	2.00568920	2430
1989 059A								
1	20149U		89278.04998095	0.00000135		13598-3	0	419
2	20149	82.9399	35.3073	0033253	77.6848	282.8026	13.72435355	9842
GPS-0015								
1	20185U		89278.84831659	0.00000015		10000-3	0	196
2	20185	54.9681	208.3472	0025910	139.4068	220.8054	2.00573218	5593
1989 064C								
1	20187U		89260.13938735	0.00297511	-24261-5	48091-3	0	512
2	20187	37.7326	185.1610	5984573	225.9569	66.7188	4.19947928	1234
Progress M								
1	20191U	89 66 A	89281.77627953	.00045590	00000-0	50857-3	0	460
2	20191	51.6203	153.3889	0013150	135.6707	224.5735	15.62227070	7296
1989 067A								
1	20193U		89270.07015316	-.00000195		10000-3	0	84
2	20193	0.0915	274.6644	0002178	230.9138	214.3921	1.00259990	309
1989 067B								
1	20194U		89271.08542268	0.00377454	40599-4	14920-2	0	437
2	20194	26.7067	268.3099	0114214	148.0929	212.6614	15.75899851	4889
1989 067C								
1	20195U		89266.75503446	0.00000661		10559-3	0	235
2	20195	23.2948	130.2409	7340528	196.6115	111.7074	2.22251302	598
Cosmos 2037								
1	20196U		89274.66879707	-.00000111		-77540-3	0	449
2	20196	73.5661	299.8346	0026255	226.2381	133.6497	12.40435505	4302
1989 068B								
1	20197U		89271.27536897	-.00000007		0		80
2	20197	73.5678	304.3743	0024860	231.5958	128.2853	12.40689206	3880
GMS-4								
1	20217U		89268.32911771	-.00000088		10000-3	0	133
2	20217	1.6381	283.1443	0016084	262.1178	96.9063	1.00266823	207
Soyuz TM-8								
1	20218U		89284.91033960	0.00124928		14596-2	0	437
2	20218	51.6283	137.5789	0015648	113.4791	242.5519	15.60544908	5634
1989 070B								
1	20230U		89281.14783252	0.00025402		36974-2	0	283
2	20230	28.5780	306.7099	7396837	198.2548	104.7424	2.15322956	5982
Cosmos 2038								
1	20232U		89281.75302871	0.00000004		0		173
2	20232	82.5760	151.8987	0012169	336.4613	23.5922	12.65098274	3070
Cosmos 2039								
1	20233U		89281.73787093	0.00000004		0		119
2	20233	82.5823	151.9023	0015723	329.1459	30.8712	12.65887701	3078
Cosmos 2040								
1	20234U		89281.72800311	0.00000004		0		129
2	20234	82.5882	152.0261	0003943	108.7809	251.3714	12.62282515	3061
Cosmos 2041								
1	20235U		89281.68521416	0.00000004		0		132

2	20235	82.5862	151.9837	0009334	343.6430	16.4359	12.64510596	3078
Cosmos 2042								
1	20236U		89281.69740463	0.00000004			0	139
2	20236	82.5840	151.9910	0005700	336.7975	23.2859	12.63874149	3074
Cosmos 2043								
1	20237U		89281.71244403	0.00000004			0	125
2	20237	82.5791	151.9895	0002540	20.7682	339.3512	12.63091374	3063
1989 074G								
1	20238U		89281.70542533	0.00000004			0	119
2	20238	82.5945	152.2587	0040583	149.1863	211.1618	12.55208456	3058
1989 077A								
1	20253U		89284.85567719	-.00000154			10000-3 0	176
2	20253	4.9865	305.4040	0000158	183.7789	176.4501	1.00249757	165
1989 077B								
1	20254U		89284.19687330	0.00147848	24024-4	34676-2 0		369
2	20254	28.5411	312.3825	7234369	189.5429	139.8451	2.38649371	398
Molniya1-76								
1	20255U		89284.80106985	-.00000163			10000-3 0	201
2	20255	62.7856	173.6664	7321114	288.2020	9.7741	2.05106968	302
1989 078B								
1	20256U		89284.17819157	0.00953840	11579-4	14259-2 0		355
2	20256	62.8285	125.5403	0223125	125.2441	236.9756	15.71888769	2125
1989 078C								
1	20257U		89285.01840242	0.01185137	36873-4	13783-2 0		373
2	20257	62.8323	122.4270	0229945	121.1295	241.2635	15.73588824	2266
1989 078D								
1	20258U		89281.33218403	-.00000324			-46696-2 0	61
2	20258	62.7657	174.0962	7317886	288.1510	9.7959	2.06175724	234
Cosmos 2046								
1	20259U		89285.17048572	-.00014857			-24321-3 0	356
2	20259	65.0361	237.4314	0009441	274.2174	85.8790	15.52000654	2254
InterCos 24								
1	20261U		89284.67469049	0.00013631			43140-2 0	489
2	20261	82.6000	26.1765	1264072	179.6122	180.6521	12.42468190	1715
1989 080C								
1	20262U		89283.94793174	-.00005800			-18326-2 0	353
2	20262	82.5999	26.6340	1264404	181.2659	178.5506	12.42593455	1621
Gorizont 19								
1	20263U		89283.44171317	-.00000254			10000-3 0	223
2	20263	1.4068	275.0536	0001628	274.4444	84.7364	1.00290418	139
1989 081D								
1	20266U		89280.43807382	-.00000320			10000-3 0	77
2	20266	1.4423	276.1007	0033057	308.5506	50.4693	1.00615357	117
Cosmos 2047								
1	20279U		89285.13999183	0.00709353	28852-4	29809-3 0		285
2	20279	67.1266	194.5286	0081506	69.3357	285.8541	16.14678383	1380
Maigon-2								
1	20281U		89284.67431734	0.00011113			34959-2 0	358

2 20281 82.5992 26.1746 1264799 179.6335 180.5944 12.42516124 1716

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